

anticoagulants; neither seems to be pertinent to the text, but both are useful adjuncts.

Each chapter has a complete bibliography which adds considerably to the value of the book.

The variety of subjects discussed necessitates a rather brief discussion of each one, but the author has succeeded rather well in emphasizing the important phases of each subject.

The radiologic illustrations are very good; the only suggestion for future editions would be to increase the size of the figures for clarity.

This comprehensive monograph should be well received by the physician interested in diseases of the aorta.

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TUBERCULOSIS—A Global Study in Social Pathology. John B. McDougall, C.B.E., M.D., F.R.C.P. (Edin.), Section of Tuberculosis, World Health Organization. The Williams and Wilkins Company, Baltimore, 1949. \$6.00.

The subtitle of this volume indicates the scope of the problem considered. The author's position with W.H.O. (United Nations) places him in a unique position to speak with authority. The first one-third of the book consists of statistical information and comments on the tuberculosis problem of each nation on the earth arranged in alphabetical order. Such information is not available elsewhere to the knowledge of the reviewer and makes this an important source book of information.

The next part contains a summary of prevailing views as to the various factors relating to morbidity and mortality from tuberculosis dealing particularly with sociologic, economic and racial factors.

The third part of the book includes detailed recommendations for the investigation of the tuberculosis problem in a community. Well planned and very specific recommendations are made for the organization of tuberculosis services under varying conditions.

The data presented make it quite clear that the methods utilized in the United States for the prevention and treatment of tuberculosis are not widely applicable to many population groups in other countries. Vaccination with BCG is regarded by the author as the most fruitful approach to the problems of tuberculosis which exist in many nations.

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NORMAL VALUES IN CLINICAL MEDICINE. By F. William Sunderman, M.D., Ph.D., Professor of Experimental Medicine and Clinical Pathology, University of Texas Postgraduate School of Medicine; and Frederick Boerner, V.M.D., Late Associate Professor of Clinical Bacteriology, Graduate School of Medicine, University of Pennsylvania. W. B. Saunders Company, Philadelphia, 1949. \$14.00.

In this volume, the authors have done a remarkable job of compilation and sorting, and they have done it with considerable discrimination. They have presented as much data as they could assemble on normal values for all the different systems and regions of the body. They have also collected data on such miscellaneous odds and ends as statistical methods, food values, drugs and doses, isotopes, life and actuarial tables, and tables of weights, measures and standards. In fact, in this book one can find normal values for anything from the reticulocyte count of a healthy man at different altitudes to the number of chews in a standard meal.

With such a tremendous number and variety of values and with the necessary bibliography involved, criteria are sometimes difficult to establish. The reader may not agree with a fair amount of the work quoted, but he must understand that the authors had to start and to stop somewhere in choosing material. And one is bound to note discrepan-

cies: In discussing the normal heart rate (page 5), after mentioning that it is subject to wide physiological variation, the statement is made, "at rest the heart averages 70 to 72 beats per minute." Then, a few lines later, the rate is given as 70 to 75 beats per minute. Differences also occur from page to page in the values given for the chemical components of the blood. Furthermore, many tests are simply mentioned by title and not elaborated upon, which is unfortunate. It does the reader little good, for instance, to read only that the "Schneider Index is an exercise tolerance test that has a rather complex method of scoring and is based upon the differences in heart rate and blood pressure measurement after change of body position and after exercise."

The book is most valuable in giving specific values, especially in tables, for different parts of the body for both adults and children of different ages. In one important aspect of normal values, it does not help the reader: It does not answer the question of how much deviation from the normal is likely to mean abnormality enough to connote disease. However, another book as large as this volume would be necessary to provide that answer.

Whether or not one approves of the criteria, of the individual quotations, or of the discrimination in evaluating the work quoted, one must concede that in this book the authors have produced a reference of unique value. It is to be recommended for every medical library.

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PHYSIOLOGY OF HEAT REGULATION AND THE SCIENCE OF CLOTHING. Prepared at the Request of the Division of Medical Sciences, National Research Council. Edited by L. H. Newburgh, M.D., Professor of Clinical Investigation, The Medical School, University of Michigan. W. B. Saunders Company, Philadelphia, 1949. \$7.50.

The editor has collected a remarkable group of essays on a very important subject and one which commands the respect of every physiologist and should capture the interest of every physician. In this volume appears the simple expression of the mechanism of maintaining constant temperature in the human economy, with the most detailed elaboration of the complicated mechanisms which are responsible for maintaining this equilibrium at the extremes of temperature and humidity. The physiologic exchanges of heat loss and production are given both from the biologic and thermodynamic viewpoints. The mechanisms of conduction, radiation, convection and evaporation in maintaining temperature equilibrium are described and expressed in masterful fashion. The first chapter on adaptation to climatic environment is written by F. R. Wulsin, and constitutes a small monograph on an important socio-anthropological study of various peoples of the world exposed to the extremes of temperature; it provides an excellent discussion of human compensations and adaptations to the environment. Aside from the information contained in the monograph, it is delightful reading.

On the whole, the book attempts to describe the marvels of the heat regulation mechanism under the entire range of climatic conditions encountered by the human subject on the earth's surface. Emphasis is placed on the capacity of the mechanisms which are devised to preserve life under the most adverse conditions.

The last third of the volume deals with the topic of the thermobarrier of clothing, which introduces a most detailed and objective study of fabrics and the application of field studies to determine their efficiency, as well as the homeothermic mechanisms of the human body in the desert, the tropics, dry cold climates, wet cold climates, and under circumstances of immersion. It is a highly technical volume, and one which will stand as authoritative for many years to come. It is highly recommended as the final word on the physiology of heat regulation.